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EXAMINER

MOORTHY, ARAVIND K

ART UNIT PAPER NUMBER

2131

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/747,513

Applicant(s)

HARS, LASZLO

Examiner

Aravind K Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-24 are pending in the application.
2. Claims 1-24 have been rejected.

Response to Amendment

3. The examiner approves the amendment to the specification. The examiner withdraws the objection to the disclosure.
4. The examiner takes note that the term "invalid encryption" does appear and is described in the specification on page 10, line 19 to page 11, line 1. Therefore, the examiner withdraws the 35 USC § 112 (1) rejection.

Response to Arguments

5. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 13 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al U.S. Patent No. 5,799,081.**

Regarding Claim 13, Kim et al discloses discloses:

- A system for merging digital recordings, comprising:

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- A system for receiving a first digital recording and a second digital recording [column 7, lines 30-38]; and
- A system for merging the first digital recording and the second digital recording into an output, wherein the output includes a disruption between the first digital recording and the second digital recording [column 7, lines 40-64].

Regarding Claim 18, Kim et al discloses all of the claimed subject matter of Claim 13, as discussed with respect to Claim 13 above, and also discloses:

- A disruption comprises a filler [column 7, lines 40-64].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Publication Number WO 99/57723 to Wijnen in view of International Publication Number WO 00/75925 A1 to Serret-Avila.

Regarding Claim 1, Wijnen discloses:

- An insertion system for inserting a disruption into a digital recording (See page 8, lines 26-38, and page 9, lines 1-9).

However, Wijnen does not disclose:

- A device for processing a watermarked digital recording, comprising:

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- A verification system for verifying the watermarked digital recording.
- And that the digital recording that has the disruption inserted into it is a watermarked digital recording.

Serret-Avila discloses:

- A device for processing a watermarked digital recording, comprising:
 - A verification system for verifying the watermarked digital recording
(See: page 15, lines 4-14 and page 17, lines 30-32; Fig. 5B and corresponding text of page 20, lines 3-14).

Wijnen could have been modified by Serret-Avila to arrive at the claimed invention in the following way:

- The disruption insertion system disclosed by Wijnen could be modified so that the digital recordings that have the disruptions inserted into them could have been watermarked as disclosed by Serret-Avila.
- The disruption insertion system for watermarked digital recordings could then also include the watermark verification system to verify the watermarked digital recording, as disclosed by Serret-Avila.

One of ordinary skill in the art would have been motivated to combine the references in the way described above, and at the time of the claimed invention, because watermarking digital recordings and providing a system to verify that the watermark is valid helps to protect against piracy.

Regarding Claim 2, the combination of Wijnen and Serret-Avila disclose all of the claimed subject matter of Claim 1, as discussed with respect to Claim 1 above. Also, note that

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the additional claim limitation is disclosed by Wijnen of the above combination. Specifically, Wijnen discloses:

- The device is a recording device (See Fig. 17 and corresponding text of page 11, lines 28-30).

Regarding Claim 3, the combination of Wijnen and Serret-Avila disclose all of the claimed subject matter of Claim 1, as discussed with respect to Claim 1 above. Also, note that the additional claim limitation is disclosed by Serret-Avila of the above combination. Specifically, Serret-Avila discloses:

- The verification system partitions the watermarked digital recording into a plurality of sections (See: Fig.'s 3 and 4A and corresponding text of page 16, lines 10-12; page 17, lines 26-34; and page 18, lines 1 and 2; Fig. 5B and corresponding text of page 20, lines 4-6).

Regarding Claim 4, the combination of Wijnen and Serret-Avila discloses all of the claimed subject matter of Claim 3, as discussed with respect to Claims 1 and 3 above. Also, note that the additional claim limitation is disclosed by Serret-Avila of the above combination. Specifically, Serret-Avila discloses:

- The verification system compares a watermark value stored in at least one section with a salient value derived from the entire watermarked digital recording (See page 16, lines 10-12; Fig. 5B and page 20, lines 4-11).

Regarding Claim 5, the combination of Wijnen and Serret-Avila discloses all of the claimed subject of Claim 4, as discussed with respect to Claims 1, 3 and 4 above. Also, note that

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the additional claim limitation is disclosed by Serret-Avila of the above combination.

Specifically, Serret-Avila discloses:

- The device of Claim 1, wherein the salient value is a hash of data contained in each of the plurality of sections (See Fig. 2B and corresponding text of page 15, lines 4-11).

Regarding Claims 10, 11 and 12, the combination of Wijnen and Serret-Avila discloses all of the claimed subject matter of Claim 1, as discussed with respect to Claim 1 above. Also, note that the additional claim limitation is disclosed by Wijnin of the above combination. Specifically, Wijnin discloses:

- The disruption comprises an amplitude modulation (See Fig. 10 and corresponding text of page 8, lines 26-38 and page 9, lines 1 and 2).
- The amplitude modulation comprises an increasing power level at a beginning of the watermarked digital recording (See Fig. 14 and corresponding text of page 9, lines 21-23).
- The amplitude modulation comprises a decaying power level at an ending of the watermarked digital recording (See page 8, lines 36-38).

8. Claims 6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wijnen and Serret-Avila as applied to claims 1-5 above, and further in view of International Publication Number WO 01/67767 A2 to Van Den Boogaard.

Regarding Claims 6, 8 and 9, the combination of Wijnen and Serret-Avila discloses all of the claimed subject matter of Claim 1, as discussed with respect to Claim 1 above. However, the references do not disclose:

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- Wherein the disruption comprises a filler.

Van Den Boogaard discloses:

- A disruption comprises a filler (See “START SEGUE A 20” of Fig. 1 and “END SEGUE C 24” of Fig. 2, and corresponding text of page 12).
- The filler is contiguously inserted before the watermarked digital recording (See “START SEGUE A 20” of Fig. 1 and corresponding text of page 12).
- The filler is contiguously inserted after the watermarked digital recording (“END SEGUE C 24” of Fig. 2, and corresponding text of page 12).

The combination of Wijnen and Serret-Avila could have been modified by Van Den Boogaard to arrive at the claimed invention in the following way:

- The disruption insertion system disclosed by the above combination could comprise a filler as disclosed by Van Den Boogaard.

One of ordinary skill in the art would have been motivated to combine the references in the way described above at the time of the claimed invention because the system of Wijnen and Serret-Avila seeks to inhibit illegal copying, and the system of Van Den Boogaard seeks to make copying unattractive or difficult (See Summary of the Invention, last paragraph of page 5).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wijnen, Serret-Avila, and Van Den Boogaard as applied to claims 1-6 above, and further in view of U.S. Pat. No. 6,580,694 to Baker.

Regarding Claim 7, the combination of Wijnen, Serret-Avil, and Kim et al discloses all of the claimed subject matter of Claim 6, as discussed with respect to Claims 1 and 6 above. However, the references do not disclose:

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- Wherein the filler comprises silence.

Baker discloses:

- Inserting silence into an audio stream (See "PLAYBACK MECHANISM 146" of Fig. 1 and corresponding text of column 3, lines 15-21).

The above combination could have been modified by Baker to arrive at the claimed invention in the following way:

- The filler that is inserted into the audio stream could comprise silence.

One of ordinary skill in the art would have been motivated to apply the above modification because inserting a filler into the audio stream degrades the audio in a way that makes it useless to one intending to listen to it for enjoyment.

10. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al U.S. Patent No. 5,799,081, as applied to Claim 13 above, further in view of U.S. Pat. No. 6,363,488 to Ginter et al.

Regarding Claim 14, Kim et al discloses all of the claimed subject matter of Claim 13, as discussed with respect to Claim 13 above. However, the reference does not disclose:

- The first digital recording and the second digital recording are encrypted such that concatenating the first digital recording and the second digital recording will result in an invalid encryption.

Ginter et al. discloses:

- Concatenating first and second digital recordings

The examiner takes official notice of the following:

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- Concatenating first and second digital recordings that have been encrypted with different keys and/or algorithms, will result in an invalid encryption.

Kim et al could have been modified by Ginter et al. to arrive at the claimed invention in the following way:

- The first digital recording and the second digital recording are encrypted such that concatenating the first digital recording and the second digital recording will result in an invalid encryption.

One of ordinary skill in the art would have been motivated to apply the above combination because two different methods of encryption for encryption first and second digital recordings, and then concatenating them, results in an encryption that cannot be decrypted without first separating the two digital recordings. An unauthorized entity would be unable to separate the recordings and thus would be unable to gain access to the unencrypted contents.

Regarding Claim 15, the combination of Kim et al and Ginter et al. as applied to Claim 14 above, discloses all of the claimed subject matter of Claim 14. Note that the additional Claim limitations are disclosed by Ginter et al. of the above combination. Specifically, Ginter et al. discloses:

- A system for decrypting (See column 37, lines 57-60).
- A system for inserting fingerprint information (See column 37, lines 57-60).
- A system for re-encrypting the decrypted output (See column 37, lines 57-60).

11. Claims 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kim et al and Ginter et al. as applied to Claim 13 above, and further in view of International Publication Number WO 00/75925 A1 to Serret-Avila.

Regarding Claim 16, the combination of Kim et al and Ginter et al. discloses all of the claimed subject matter of Claim 13, as discussed with respect to Claim 13 above. However, the reference does not disclose:

- A verification system for verifying watermarks in the first and second digital recordings.

Serret-Avila discloses:

- A verification system for verifying watermarks in the first and second digital recordings.

The above combination could have been modified by Serret-Avila to arrive at the claimed invention in the following way:

- The system could further comprise a verification system for verifying watermarks in the first and second digital recordings

One of ordinary skill in the art would have been motivated to apply the above combination at the time of the claimed invention because watermarks help to provide copy protection of digital contents.

Regarding Claim 17, the combination of Kim et al, Ginter et al., and Serret-Avila discloses all of the claimed subject matter regarding Claim 16, as discussed with respect to Claims 13 and 16 above. Note that the combination also discloses the additional claim limitations of Claim 17. Specifically, Serret-Avila discloses:

- The verification system includes a system for aborting the creation of the output if the watermarks are not verified (See “1208” of Fig. 12B. Note that preventing copying corresponds to aborting the creation of output).

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12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as applied to Claim 13 above, and further in view of International Publication Number WO 99/57723 to Wijnen.

Regarding Claim 19, Kim et al discloses all of the claimed subject matter of Claim 13, as discussed with respect to Claim 13 above, however the reference does not disclose:

- Wherein the disruption comprises an amplitude modulation.

Wijnen discloses:

- The disruption comprises an amplitude modulation (See Fig. 10 and corresponding text of page 8, lines 26-38 and page 9, lines 1 and 2).

Kim et al could have been modified by Wijnen to arrive at the claimed invention in the following way:

- The disruption could comprise an amplitude modulation.

One of ordinary skill in the art would have been motivated to apply the above combination because the use of a second type of disruption enhances the Wijnen system by creating more variation in the types of disruption, making any measures designed to bypass the copy protection more difficult to implement.

13. Claims 20, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of International Publication Number WO 00/75925 A1 to Serret-Avila.

Regarding Claim 20, 21, and 22, Kim et al discloses:

- A method for merging digital recordings, comprising:
 - Merging first and second digital recordings, as discussed above; and

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- Generating an output, wherein the output includes a disruption between the first and the second digital recordings, as discussed above.
- The disruption includes a contiguously inserted filler [column 7, lines 40-52].

However, Kim et al does not disclose:

- Verifying the first and second digital recordings; and
- Wherein the verifying step includes comparing a watermark value inserted into at least one section of the digital recording with a salient value of the entire digital recording.

Serret-Avila discloses:

- Verifying the first and second digital recordings (See: page 15, lines 4-14 and page 17, lines 30-32; Fig. 5B and corresponding text of page 20, lines 3-14).; and
- Wherein the verifying step includes comparing a watermark value inserted into at least one section of the digital recording with a salient value of the entire digital recording (See page 16, lines 10-12; Fig. 5B and page 20, lines 4-11)..

Kim et al could have been modified by Serret-Avila to arrive at the claimed invention in the following way:

- The step of verifying the first and second digital recordings as taught by Serret-Avila could be added to Van Den Boogaard.

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- The verifying step could then include comparing a watermark value inserted into at least one section of the digital recording with a salient value of the entire digital recording.

One of ordinary skill in the art would have been motivated to combine the references in the way described above, and at the time of the claimed invention, because watermarking digital recordings and providing a system to verify that the watermark is valid helps to protect against piracy.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kim et al and Serret-Avila, as applied to Claims 20-22 above, and further in view of Wijnen.

Regarding Claim 23, the combination of Kim et al and Serret-Avila discloses all of the claimed subject matter of Claim 20, as discussed with respect to Claim 20 above. However, the references do not disclose:

- Wherein the disruption includes an amplitude modulation of at least one of the first and second digital recordings.

Wijnen discloses:

- Wherein the disruption includes an amplitude modulation of at least one of the first and second digital recordings (See Fig. 10 and corresponding text of page 8, lines 26-38 and page 9, lines 1 and 2).

The combination of Kim et al and Serret-Avila could have been modified by Wijnen to arrive at the claimed invention in the following way:

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- The disruption could include an amplitude modulation of at least one of the first and second digital recordings.

One of ordinary skill in the art would have been motivated to apply the above modification at the time of the claimed invention because providing another type of disruption would make it more infeasible for someone to be able to bypass the copy protection system, because the person would have to deal with eliminating two types of disruptions as opposed to just one.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kim et al and Serret-Avila, as applied to Claim 20 above, and further in view of Ginter et al.

Regarding Claim 24, the combination of Kim et al and Serret-Avila discloses all of the claimed subject matter of Claim 20, as discussed with respect to Claim 20 above. However, the references do not disclose:

- Wherein the first and the second digital recordings are encrypted, and wherein the merging step includes the step of decrypting the first and second digital recordings, concatenating the first and second digital recordings with the disruption, and encrypting the output.

Ginter et al. discloses:

- A system for decrypting (See column 37, lines 57-60).
- A system for inserting fingerprint information (See column 37, lines 57-60).
- A system for re-encrypting the decrypted output (See column 37, lines 57-60).

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The combination of Kim et al and Serret-Avila could have been modified by Ginter et al. to arrive at the claimed invention in the following way:

- The digital recordings could be decrypted as taught by Ginter et al.
- Instead of inserting fingerprint information as taught by Ginter et al., a disruption could be inserted.
- The decrypted output could then be re-encrypted as taught by Ginter et al.

One of ordinary skill in the art would have been motivated to make the above modification at the time of the claimed invention because the system of decrypting, inserting, and then re-encrypting taught by Ginter et al. provides confidentiality both before and after the insertion step.

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy
September 17, 2004


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